

DOCUMENT RESUME

ED 279 407

PS 016 344

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TITLE Early Education: What Should Young Children Be Doing?
PUB DATE 87
NOTE 22p.
PUB TYPE Viewpoints (120) -- Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Early Childhood Education; *Educational Malpractice; *Educational Objectives; Educational Practices; *Intellectual Experience; Interpersonal Competence; Learning; *Preschool Curriculum; *Social Development; *Student Projects; Teacher Role; Teaching Methods; Young Children
IDENTIFIERS Academic Stress; *Dispositions (Psychology)

ABSTRACT

Contrasting academic and intellectual approaches to preschool programs, this review of current research and discussion of implications for improving educational practices, identifies conditions of children's environments that facilitate their development. The review centers on risks related to pressuring young children to acquire academic concepts and skills, including the possibility that early academic pressure may undermine the development of dispositions (i.e., characteristic ways of responding to experience across types of situations) to use acquired skills, may result in the use of a single teaching method and curriculum, and may increase children's feelings of incompetence. It is pointed out that the implementation of a "pushed down" elementary school curriculum reduces young children's opportunities to become engaged in interactive processes, processes known to be important for learning among young children. As an alternative to the academic approach, an interactive context for early learning is discussed in terms of the development of communicative competence, of the disposition to become deeply interested in an activity or concern, and of social competence guided, as needed, by teachers with specialized training in helping young children maximize the educative potential of interaction. The discussion of implications for preschool programs centers on the value of an intellectually oriented, project-based curriculum which strengthens children's dispositions to observe, experiment, inquire, and reconstruct aspects of their environment. (RH)

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EARLY EDUCATION: WHAT SHOULD YOUNG CHILDREN BE DOING?

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Introduction

Ideally, the question of whether young children should be in the public schools could be answered by inspecting a substantial body of empirical studies on the subject. Some of these studies would show which children seem to benefit, which are unaffected, and which suffer from early experience in the schools. The data would then indicate long-term as well as short-term effects on children in different kinds of schools, would tell us the effects of different kinds of curricula and teaching methods, and the effects of teachers with different backgrounds, training, and experience. Some of the studies in our ideal research world would indicate the comparative effects on children of public school, Head Start, profit, non-profit, community-based, cooperative, and other kinds of programs. Other studies would tell us in detail what experiences youngsters are having when provisions are not made for them in the public schools.

Regrettably, a body of studies focused directly on the topic of young children in the public schools is not yet available. In its absence we must turn to the general data base on preschool-aged children's development and learning and make the best inferences we can. This is not a simple matter. I have suggested elsewhere that it is a general principle that any field characterized by a weak data base has a vacuum which is filled by ideologies (Katz, 1977a). The field of early childhood education has an inherently weak data base, partly because it would be unethical as well as impractical to perform the definitive experiments necessary to produce strong data and settle major disputes; and partly because the child is studied during a period of such rapid development that it is difficult to discriminate among changes caused by intervention treatments versus changes caused by maturation. Thus, many of the contentious issues concerning young children in the schools are debated from ideological positions that are fairly resistant to change and are often accompanied by a tendency to dismiss counter evidence as deficient or inappropriate.

There are clearly many different issues surrounding the question of whether or not young children should be in

public schools, and most are addressed elsewhere in this volume. The issue addressed here is: What should young children be doing, wherever they are: Whether at home with siblings or grandma, with a sitter, at a licensed family day care home, a Head Start class, a franchised day care center, Yale Child Development Center, or a rural or urban public school. Let's consider what young children should be doing, in two parts: First, an overview of current research on children's development and learning, including what we know about the ways in which children learn; how they develop communicative and social competence; children's interest levels; and a discussion of research evidence related to risks associated with academic procedures. The second part is a discussion of the implications of research for educational programming for young children, no matter who the sponsor, looking at how research on these aspects of development can inform early childhood education practices. Specific pedagogical strategies that build upon the research evidence are also suggested.

Child Development and Preschool Education

While there is, as yet, no body of specific research that directly examines the effects of public schooling on young children, there are important things to be gleaned from what has been reported to date. Furthermore, while the requisite data on the effects of schooling on young children are not yet sufficient for drawing reliable conclusions, there is an abundance of research on intellectual and social development and learning, which is rich with implications for the kind of teaching and curriculum that should be provided for children.

Four Categories of Learning

In drawing inferences from research concerning programming for young children, I find it helpful to think in terms of four types of learning goals: knowledge, skills, dispositions, and feelings. Knowledge during the preschool period can be broadly defined as information, ideas, stories, facts, concepts, schemas, and other such "contents of mind" that make up much of the content to be covered in a curriculum. Skills can be defined as brief and small units

of action or behavior that are easily observed, for example, walking along a balance beam or writing one's name. Mental skills included in this category can be fairly easily inferred from observed behavior that occurs in small units of time, or on a given single occasion, such as counting the fingers on a hand. Mental processes difficult to infer from observed behavior might include skills and many other kinds of information processing as well. Dispositions, usually omitted from lists of educational goals, are broadly defined as relatively enduring "habits of mind," or characteristic ways of responding to experience across types of situations, for example, curiosity, generosity, quarrelsomeness, and so on. Feelings include feelings of belonging, self-confidence, and unloveability (Katz, 1985). It is not clear which feelings are learned from experience. Surely many of them such as anger, sadness, and frustration are temporary reactions to situations and experiences. But feelings of competence and incompetence, acceptance or rejection in the school or classroom situation could be said to be learned in that they are the feelings typically aroused in that context.

These four categories of goals are achieved in different ways. Children can be helped to acquire knowledge by being informed about and alerted to relevant phenomena. Skills may be learned partly from observation, imitation, trial and error, instruction, and optimum amounts of drill and practice. Lessons and workbooks can be used to aid the acquisition of skills. Dispositions, on the other hand, are not likely to be learned from lessons, instructions, or lectures. Children are most likely to learn dispositions from observation and emulation of models. The dispositions are then shaped and strengthened by being appreciated and acknowledged. A general principle related to strengthening dispositions is that they must be manifested in some way and these manifestations must then be followed by positive responses. If, for example, we wish to strengthen children's dispositions to be curious, it will be necessary to provide opportunities for children to act upon or otherwise express their curiosity. We must then convey our appreciation of the disposition with appropriate responses. Of course, not all dispositions are desirable, and some have to be responded to in such a way that they are weakened. Among the dispositions to be strengthened in early childhood are cooperativeness, curiosity, resourcefulness, and the disposition to be

absorbed and interested in worthwhile explorations and activities.

Some Risks of Academic Pressures on Young Children

Among the issues surrounding whether young children should be in the public schools is the fear that they will be introduced to the kind of formalized instruction and academic school work associated with elementary grades. The issue is not whether preschool children can start school work early. Observation of young children in many preschool settings indicates that they can certainly be given instruction in phonics, counting, and other academic tasks. But the fact that children can do something is not sufficient justification for requiring it of them. While there is no compelling evidence to suggest that early introduction to academic work guarantees success in school in the long term, there are reasons to believe that it could be counterproductive.

"Damaged disposition" hypothesis. Certainly young children can be successfully instructed in beginning reading skills; however, the risk of such early achievements is that in the process of instruction, given the amount of drill and practice required for success at an early age, children's dispositions to be readers will be undermined. This view can be referred to as the "damaged disposition hypothesis" which suggests that the early introduction of academic or basic skills may undermine the development of children's dispositions to use the skills thus acquired (Katz, 1985).

The "damaged disposition" hypothesis seems to be a reasonable interpretation of some of the results of longitudinal studies (for example, Karnes and others, 1983; Miller & Bizzell, 1983; Schweinhart and others, 1986; see also Walberg, 1984). As we look at the results of such studies, the early pressure on young children to perform academic tasks introduced through direct instruction (for example, practice in phonics, work book exercises) appears quite harmless, or even beneficial, in the short term. But, as developmentalists, we are obliged to take into account the potential long-term consequences of early experiences; no matter how benign they appear to be at the time they

occur. Results from longitudinal studies suggest that curricula and teaching methods should be approached so as to optimize the acquisition of knowledge, skills, and desirable dispositions and feelings; and that these are mutually inclusive goals, giving each type of learning equal weight. It is clearly not very useful to have skills if, in the process of acquiring them, the disposition to use them is lost. On the other hand, having the disposition without the requisite skills is also not a desirable educational outcome. The challenge for educators--at every level--is to help the learner with both the acquisition of skills and the strengthening of desirable dispositions.

Homogeneity of treatments. Another risk for preschool programs that emphasize academic or basic skills is that they tend to use a single teaching method and curriculum. The principle of relevance here is that use of a single teaching or instructional method (a homogeneous treatment) with a group of children of diverse backgrounds and developmental patterns must produce heterogeneous outcomes. Needless to say, we want some outcomes of education to be heterogeneous. But it is reasonable to hypothesize that for those outcomes that we wish to be homogeneous, such as all children having the disposition to be readers, the treatment is likely to have to be heterogeneous. It is reasonable to assume that when a single teaching method is used for a diverse group of young children, a significant proportion of them is likely to fail. It also seems to be a reasonable hypothesis that the younger the children are, the greater the variety of teaching methods should be (Durkin, 1980; see also Nelson & Seidman, 1984). Although, for reasons of stability and practicality, there are likely to be limits upon how varied the teaching methods can be. This hypothesis is derived from the assumption that the younger the group, the less likely they are to have been socialized into a particular and standard way of responding to their environment; and the more likely it is that the children's background experiences related to their readiness to learn are unique and idiosyncratic rather than common and shared.

Academically focused curricula typically adopt a single pedagogical method dominated by workbooks, drill, and practice. Even though such approaches often claim to "individualize" instruction, what is typically individualized is the day on which a given child completes a

task, rather than the task itself! I suspect that very often "time on task" for the children in such programs could be called "time on deadly task." After a year or two of such schooling the effect on the disposition to learn is likely to be deadening!

Learned stupidity. Another risk that may attend introducing young children to academic work prematurely is that those children who cannot relate to the content or tasks required are likely to feel incompetent. When the content or tasks of a lesson for college students are difficult to grasp or perform, the student is very likely to fault the instructor, as many of us well know! However, in the case of young children--perhaps older ones as well--repeated experiences of being unable to relate to school work are likely to lead to the self-attribution of stupidity, which can be called "learned stupidity." Such children are then very likely to bring their behavior into line with this attribution.

Interaction as a Context for Early Learning

One of the most reliable principles implied by developmental research is that young children's learning is enhanced when the children are engaged in interactive processes (Brown & Campione, 1984; Glaser, 1984; Karmiloff-Smith, 1984; Nelson, 1985; Rogoff, 1982.). It now seems clear that in addition to learning through trial, error, and observation, young children gain a great deal, cognitively as well as socially, in the course of interacting with each other, with adults, and with aspects of their environment. This trend in research also implies that children's learning is best served when they are involved in active rather than passive activities. One of the weaknesses of having the conventional academic tasks included in the "pushed down" elementary school curriculum, is the resulting reduction of the extent to which children are engaged in interactive processes.

The Development of Communicative Competence

Virtually all who are concerned with children in the early years recognize that early childhood is a critical period in the development of communicative competence, namely competence in self-expression and in understanding others.

Contemporary insights into the development of communicative competence in young children indicate that all three basic functions of language (communication, expression, and reasoning) are strengthened when children are engaged in conversation, rather than when they are simply passively exposed to language. Virtually all aspects of communication are most fully developed when children engage in conversations with adults and other children (Wells, 1983).

Conversations are a very special type of interaction in which the content of each participant's responses is contingent upon the other's, in a sequential string of interactions. It may very well be that the contingency of the responses of adults to children in and of itself has a powerful effect on the development of their intellects. Conversation is more likely to be prolonged when adults make comments to children than when they ask them questions (Blank, 1985).

The work of Bruner (1982) and others suggests that conversation is most likely to occur when children are in small groups of three or four, with or without an adult present. Most teachers of young children recognize the difficulty of encouraging conversation during a whole group session: they expend much effort reminding children that another child is still speaking or that their turn has not yet come! It seems reasonably clear that children are most likely to engage in conversation when something of interest occurs in context (Bruner, 1982; Clark & Wade, 1983). I watched a kindergarten teacher who was attempting to engage a class of 5-year-old children in a discussion by asking each in turn "What is your news today?" Each child struggled to find something headline-worthy to report to his or her disinterested squirming classmates! Perhaps some of these children were learning "to listen" as the teacher intended, but many appeared to be learning "to tune out" their stammering classmates.

The Development of Interest

One of the important dispositions of concern to educators of young children is interest, or the capacity to "lose oneself" in an activity or concern outside of oneself. Interest refers to the capability of becoming deeply enough absorbed in something to pursue it over time, with

sufficient commitment to accept the routine as well as novel aspects of work. Sometimes called "intrinsic motivation" (Morgan, 1984), "continuing motivation" (Maehr, 1982), or "self-directed learning" (Benware & Deci, 1984), this disposition appears to be present in the normal human at birth and is affected by a variety of social-psychological processes throughout childhood.

Recent research has illuminated the effects of different kinds of feedback on learners' interest and intrinsic motivation, or what I refer to as the disposition called interest. Research on the so-called "overjustification effect" suggests that when children are rewarded for tasks in which they had initially shown interest, the reward is followed by loss of interest in them. Thus, in such cases, rewards undermine children's interest. The overjustification effect refers to metacognitive processes assumed to be occurring in children's minds, suggesting that children respond to such rewards by saying to themselves, "It must be wrong to like doing X, if I am given a reward for doing it" (Deci & Ryan, 1982). Since this effect applies especially to those activities children originally find interesting, it suggests that teachers should exercise special care not to offer rewards for those activities young children spontaneously enjoy, find attractive, or are easily encouraged to engage in.

A parallel line of research on related processes suggests that when the positive feedback given to children is general in nature, it may serve to increase productivity but not interest (deCharms, 1983). General positive feedback includes vague comments on the part of the teacher like "very good," "well done," and the decorative smiling face or gold star. If, on the other hand, the positive feedback is specific rather than general, particularly if it includes information about the competence of the performance, it serves to strengthen interest. The latter is called a "tribute," the former, an "inducement." A tribute is associated with increasing interest in the task, whereas an inducement leads to loss of interest once the positive feedback becomes unavailable. Academically oriented programs typically emphasize general positive feedback, ostensibly to give children feelings of success and to spur productivity. This strategy appears to work very well to induce young children to keep working at disembedded, decontextualized,

and often very trivial tasks. However, the research on the effects of rewards strongly suggests that children may suffer academic "burn-out" after two or three years of experience with general positive extrinsic rewards.

As suggested elsewhere (Katz, 1977b), curricula and teaching methods that attempt to provide children with constant amusement, fun, and excitement also risk undermining the development of children's disposition for interest. Thus, the teacher's role in strengthening children's dispositions to be interested in relevant and worthwhile phenomena, is a complex and highly critical one. Children's dispositions toward sustained interest and involvement can be strengthened when children are encouraged to engage in projects that call for effort and involvement over time, and provide contexts for extension, elaboration, and continuation of work and play (Rosenfield, Folger, & Adelman, 1980). The disposition to lose oneself in an activity may also be threatened by frequent interruptions. Thus, the daily program for young children should allow for flexibility rather than fragmentation in the allocation of time to various activities.

Social Competence

Although definitions of social competence vary on some of the details, they generally include the capacity to initiate, develop, and maintain satisfying relationships with others, especially peers. Social competence does not require a child to be a social butterfly. It is not a source of concern if a child chooses to work or play alone, as long as he or she is capable of interacting productively and successfully with another when desired or when appropriate.

However, contemporary research indicates that if a child has not acquired minimal social competence by the age of about six (give or take a year), the youngster is more likely than others to be a school dropout (Gottman, 1983; Parker & Asher, 1986). That child will also be at significant risk in young adulthood in terms of mental health, marital adjustment, and other aspects of social life in which interpersonal competence is required (Asher, Renshaw & Hymel, 1982).

The acquisition of social competence involves many complex processes beginning in early infancy. It should be noted that inappropriate, as well as appropriate, social responses are learned through interaction. Weaknesses in social competence may be intensified during such interactions unless adults help the child alter maladaptive patterns. In the preschool period, inadequate peer-interactive skills are unlikely to be improved through formal instruction or even coaching. Rather, they can be modified by the intervention of a knowledgeable teacher (compare Katz, 1984). Fortunately, a range of techniques that teachers can use to foster the development of social competence is now available (Burton, in press; Katz, 1984).

The Recursive Cycle

It is useful to think of social competence as having the characteristics of a recursive cycle. The principle of the recursive cycle is that, once an individual has a given behavior or characteristic, reactions to him or her tend to increase the chances that he or she will display more of that behavior or characteristic. For example, children who are likable, attractive, and friendly tend to elicit positive responses in others fairly easily, and because they receive such positive responses, they become more likable, attractive, and friendly. Similarly, children who are unattractive, unfriendly, and difficult to like tend to be avoided or rejected by others. In response to this avoidance and rejection, they tend to behave in ways that make them even more unattractive. This in turn increases the likelihood that they will more often be avoided or rejected, and the cycle becomes well-established. This general principle can be applied to many kinds of behavior and learning, but especially to social behaviors (see also Patterson, 1986).

The principle of the recursive cycle confirms the point made earlier, that young children should be engaged in interactive processes, especially in the company of teachers who have specialized training and competencies in helping young children maximize the educative potential of interaction. Unfortunately, a young child cannot break a negative cycle alone. Even for adults, breaking a disfunctional cycle by oneself is very difficult. The young

child's capacity to understand the cause of his or her social difficulties and make the necessary adjustments is virtually nil. Adults must intervene to break faulty cycles. Adults can teach young children more productive peer interactive patterns in situ during on-going social interaction in the early childhood setting.

Recent experience suggests that if we respond to children's needs for help in the development of their social competence in the early years, we can do a great deal to get them on a positive cycle and relieve them of much anguish that inevitably accompanies social difficulties in childhood. If we wait until a child is 9 or 10 years old and is making life for him or herself or for others difficult, we may need substantial resources from a mental health agency to intervene, and still may be too late. These recent insights from research on children's social competence suggest that preschool teachers' concern with social development is well placed, and should be given as much weight in planning and teaching as is children's intellectual development.

Specific Implications for Preschool Programs

Curriculum options. Many people within and without the field of early childhood education think that the choice for curriculum is to have either an academic or a socialization focus. Some of the risks of introducing academic tasks to young children have already been indicated. But the alternative is not simply to provide spontaneous play, though all children up to about 7 or 8 years of age can probably benefit from spontaneous play. Rather, the data on children's learning seem to suggest that what is required in preschool and kindergarten is an intellectually oriented approach in which children interact in small groups as they work together on a variety of projects which help them make sense of their own experience. These projects should also strengthen their dispositions to observe, experiment, inquire, and reconstruct aspects of their environment.

In addition to the insights drawn from research on specific aspects of development, research on the impacts of different kinds of early childhood curricula support the view that young children should be in preschool and kindergarten programs which provide opportunities for interaction, active

rather than passive activities, and in which they have ample opportunity to initiate activities that interest them (Koester & Farley, 1982; Fry & Addington, 1984). The benefits of informal interactive teaching methods are especially striking in the long term, and notably discouraging in the short term (Miller & Bizzell, 1983; Schweinhart, Weikart & Lerner, 1986). According to Walberg (1984) a synthesis of 153 studies of open education, including 90 dissertations, indicates that

...the average effect [size for open education] was near zero for achievement, locus of control, self concept, and anxiety (which suggests no difference between open and control classes on these criteria); about .2* for adjustment, attitude toward schools and teachers, curiosity, and general mental ability; and about a moderate .3* for cooperativeness, creativity, and independence. Thus students in open classes do no worse in standardized achievement and slightly to moderately better on several outcomes that educators, parents and students hold to be of great value.

* This statistic, derived from a meta-analysis, represents a modest positive effect on the variables listed for open compared with traditional formal classes.

(Walberg, 1984, p. 25).

In sum, insights derived from developmental and related curriculum research support the view that a significant proportion of the time children spend in preschool and kindergarten classes should be allocated to the kind of project or unit work characteristic of pedagogical methods which are intellectually-oriented and informal. This classroom approach was known in the 1960s as open education, the integrated day, or informal methods.

The Value of Project Work for Young Children

The project approach is a particularly promising strategy for fostering children's interactions as suggested by contemporary research. A project is a group undertaking, usually around a particular theme or topic. A project involves a variety of kinds of work over a period of several days or weeks.

Types of projects. There are three basic types of projects, though some are combinations of two or more. During the preschool period the most common type of project consists of reconstructions of environmental aspects within the preschool or primary school setting. Another type of project consists of investigations of aspects of the environment, and includes development of various ways to report the findings of the investigations to classmates. A third type consists largely of observing aspects of the environment and preparing ways to present or report what was learned from the observations to others in the class. Certainly many projects may be various mixtures of the three basic types.

A topic or theme for a project depending in part on the ages of the children may be introduced by the teacher, or children, or evolve from discussions they have together. There may or may not be a project leader who coordinates the activities of the group. On some occasions the membership of the project group may fluctuate; at other times, it may be beneficial to require stability in group membership or to encourage the members to carry their part of a project through to completion.

Project phases. Projects usually have three rough phases that are likely to blend into each other. First is a planning phase during which children and staff discuss the elements of the project, develop plans and procedures for obtaining the materials, build the elements, or carry out the investigations and observations. This phase would also include discussions about what information to obtain during field trips or site visits and provide ample opportunities for rich discussion and for children to display and generate interest in the project.

A second phase consists of constructing or building the parts of the project, gathering information or making observations, or making pictures by which others in the class can know what has been learned. A third phase includes role playing or taking the roles appropriate to the various elements of the project. During this period, extensions and elaborations on elements of the project may be undertaken. Almost any aspect of the environment can become the focus of a project. Many opportunities for cooperative social interaction occur in all three phases of a project.

I recently heard indirectly about a group of kindergarteners who undertook a detailed study of their own school bus! Though I have no direct knowledge of the entire scope of their project, it is easy to see what kinds of activities the children might have undertaken. One small group could study the driving mechanism including the motor and gear shifts, brakes, accelerator, steering wheel, and so forth. Another can study the variety of lights inside and outside the bus. It can be noted by the children that some lights are for signals, others are to give a warning, and others, of course, are to light the way ahead as well as inside. Other children in the class can study the gauges and dials in the bus and what kinds of information they yield. Another group can take measurements of the width of the bus, count the number of seats, establish how many wheels it has, and learn something about air pressure in the tires. Perhaps two of them can examine the inside and outside rear-view mirrors. Imagine what kind of vocabulary building can accompany such a study: terms like ignition, emergency door, fuel, dial, gauge, air pressure, accelerator, rear-view mirror, gears, and so forth. Those children able to do so could copy down all the "writing" they could find on the bus and use it for vocabulary and reading studies in the classroom. The door of a school bus, usually opening and closing in accordian fashion, is unlikely to resemble those in the children's homes or their school, so varieties of doors in their immediate environment might become a topic for extended study. Study can extend to the route taken by the bus, who and how many children board at each stop, what traffic signs and signals are passed en route, and so forth. According to my informant, following the detailed examination of their bus, the children built a bus from scrap materials in their classroom and then acted out a

variety of roles associated with transporting children from home to school and back. Virtually all aspects of the work undertaken by the children in this project lent themselves to art work including drawing, painting, making paper, and making plasticene or wooden models.

There is no special virtue to studying a school bus in the sense that some important test will ever examine the knowledge children gained from the project. What is important is that the bus is part of the children's own daily environment and that they learned a lot about it: the correct names of various parts of it, a simple understanding of how it works, and what features of it contribute to their safety. It is especially important that the project provides a context in which children's dispositions to observe, inquire, and become interested and involved in a sustained group effort can be strengthened. In a project of this type the teacher alerts children to a wide range of potentially interesting aspects of the topic that will take several days or even weeks of continuous probing and exploring. They can ask questions of adults, such as the bus driver and perhaps a mechanic, and look up things in reference books of appropriate levels of difficulty. The fact that the children are expected to tell and explain what they have learned to their own classmates is likely to encourage persistence in attaining information and reaching for adequate understanding (compare Benware & Deci, 1984). The use of adults, other than just teachers, as sources of potentially valuable information can be launched through this kind of project. Furthermore, for many of the children in the class, this project is likely to strengthen the disposition to observe all kinds of other vehicles more closely than they had before, perhaps making useful comparisons and reporting them to their classmates from time to time.

In sum, the project approach can be valuable for young children because it addresses their intellects. It can strengthen a variety of important dispositions, provide rich content for conversation, and a context for peer interaction in which cooperative effort makes sense. Projects are also culturally relevant in that they stem from the children's own interests and environments. But it should not be overlooked that another virtue of the project approach is that it can make teaching interesting--something very

unlikely to be characteristic of the more formal academic approaches to early childhood education.

Conclusion

Many educators and parents, concerned about the education of young children, express the fear that programs provided in public schools will inevitably offer experiences that too closely resemble the formal academic approach appropriate for the elementary school years. Indeed, there is some concern also that many programs for young children outside of the public schools offer programs oriented toward academic goals. Although the research bearing directly on these issues is as yet scant, we have learned much from developmental studies bearing indirectly on curriculum issues. It seems to me that the alternative to an academic approach is not simply to provide endless play, but pleasant spontaneous play as well. The appropriate contrast to the academic approach is an intellectual approach.

The inclusion of project work in the curriculum is consistent with the intention to engage young children's minds in improving their understandings of relevant phenomena in their environment, and to provide a context in which the development and application of their social competencies are strongly encouraged. Both intellectual and social development can be well served by the project approach, whether it is offered in a public or private group setting.

I have suggested that the project approach is not only developmentally appropriate, it is also culturally appropriate; and since it can make teaching interesting, it provides a context in which children can observe adults intellectually engaged and interested in what they are doing.

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